

STRUCTURAL GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE **2006** INTERNATIONAL BUILDING CODE AND THE COUNTY OF HAWAII AMENDMENTS.

2. STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE, AND DO NOT SPECIFY THE MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEANS NECESSARY TO PROTECT THE STRUCTURE, AND ANY ADJACENT NEW OR EXISTING STRUCTURES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING AND SHORING FOR LOADS ACTING ON THE STRUCTURE DURING CONSTRUCTION.

OBSERVATION BY THE STRUCTURAL ENGINEER DURING CONSTRUCTION WILL NOT INCLUDE INSPECTION OF AFOREMENTIONED BRACING AND SHORING.

3. EXISTING CONDITIONS ARE SHOWN TO THE BEST OF OUR KNOWLEDGE. DISCREPANCIES SHALL PROMPTLY BE REPORTED TO THE ARCHITECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.

4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES, WHICH MAY BE AFFECTED BY HIS WORK. INTERFERENCES WITH THE STRUCTURE SHALL PROMPTLY BE REPORTED TO THE ARCHITECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.

5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND VERIFYING ALL DIMENSIONS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL STRUCTURAL DISCREPANCIES, AND THESE DISCREPANCIES SHALL BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.

6. SHOULD A DISCREPANCY OCCUR ON THE DRAWINGS BETWEEN ANY PROJECT SPECIAL NOTES/SPECIAL DETAILS, AND THE TYPICAL SPECS/TYPICAL DETAILS, SAID SPECIAL NOTES/SPECIAL DETAILS SHALL TAKE PRECEDENCE.

7. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND LOCATIONS OF ARCHITECTURAL OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS.

8. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR DIMENSIONS AND LOCATIONS OF ELECTRICAL/MECHANICAL PENETRATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

9. PENETRATIONS AND OPENINGS WITH ANY DIMENSION GREATER THAN 2" THAT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS ARE PROHIBITED UNLESS APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. NO PENETRATION SHALL BE ALLOWED THROUGH ANY STRUCTURAL MEMBER WITHOUT THE APPROVAL OF THE ENGINEER.

10. ANY CONSTRUCTION MATERIAL THAT IS TEMPORARILY PLACED ON FLOOR AND/OR ROOF FRAMING SHALL BE DISTRIBUTED OVER THE FRAMING SYSTEM SUCH THAT THE CONSTRUCTION LOAD DOES NOT EXCEED THE LOAD THAT THE FRAMING SYSTEM WAS DESIGNED FOR.

11. DESIGN CRITERIA –

A. CODES AND STANDARDS

1. INTERNATIONAL BUILDING CODE, **2006** EDITION

B. DESIGN LIVE LOADS

1. ROOF = 20 PSF  
2. CEILING = 20 PSF

C. DESIGN DEAD LOADS (ADDITIONAL TO SELF WEIGHT)

1. FINISH @ ROOF = 9 PSF  
2. MECHANICAL & ELECTRICAL @ ROOF = 4 PSF  
3. COLLATERAL ROOF LOAD (FUTURE PV MODULES) = 3 PSF

D. WIND

BASIC WIND SPEED105 MPH

EFFECTIVE WIND SPEED / Kzt100 MPH / 1.0

EXPOSURE CATEGORYC

PRIMARY FRAME DESIGN METHODMETHOD 2 (ANALYTICAL PROCEDURE)

BUILDING CLASSIFICATIONPARTIALLY OPENED/ENCLOSED

IMPORTANCE FACTOR1.15

E. SEISMIC

OCCUPANCY CATEGORYIII

SITE CLASSB

Sds1.55 g

Sd10.66 g

SEISMIC DESIGN CATEGORYE

12. SHOP DRAWINGS REQUIRED BY THE SPECIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENTS.

13. THE CONTRACTOR SHALL DETAIL ALL MEMBERS AND CONNECTIONS NOT SHOWN BUT WHICH ARE REQUIRED AND SHALL SUBMIT THEM TO THE ENGINEER FOR REVIEW. COST OF THESE MEMBERS AND CONNECTIONS SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE.

14. ALL COSTS FOR SATISFYING THE REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS SHALL BE BORNE BY THE CONTRACTOR.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE ADJACENT PROPERTIES, STRUCTURES, STREETS AND UTILITIES DURING THE CONSTRUCTION PERIOD.

16. DETAILS NOTED AS TYPICAL ON THE STRUCTURAL DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS SPECIFICALLY SHOWN OR NOTED.

17. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS MUST SUBMIT IN WRITING ANY REQUESTS FOR MODIFICATIONS TO THE PLANS AND SPECIFICATIONS.
- PRE-ENGINEERED METAL BUILDING:
1. PRE-ENGINEERED METAL BUILDING SHALL COMPLY WITH THE DESIGN REQUIREMENTS OF THE 2006 IBC AND THE COUNTY OF HAWAII AMENDMENTS.

2. THE PRE-ENGINEERED METAL BUILDING SHALL BE DESIGNED TO HAVE A MAXIMUM DEFLECTION OF H/200.

2. PRE-ENGINEERED METAL BUILDING DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF HAWAII.

3. LOADING FOR THE PRE-ENGINEERED METAL BUILDING SHALL COMPLY WITH THE DESIGN CRITERIA LISTED IN THE GENERAL STRUCTURAL NOTES.

4. FOUNDATION FORMWORK SHALL BE PLACED ONLY AFTER ANCHOR BOLT PLACEMENT PLAN AND BUILDING SHOP DRAWINGS HAVE BEEN RECEIVED AND REVIEWED BY THE STRUCTURAL ENGINEER. ANCHOR BOLT PLACEMENT PLAN AND SHOP DRAWINGS SHALL BE SUBMITTED AT LEAST 2 WEEKS PRIOR TO CONSTRUCTION OF FORMWORK. FOUNDATION DESIGN IS SUBJECT TO CHANGE BASED ON SHOP DRAWING REVIEW.

5. BRACING LOCATIONS ARE SPECIFIED ON PLAN. DO NOT LOCATE BRACING IN THE SAME BAY AS WINDOWS OR DOOR OPENINGS.

6. MANUFACTURER TO SUBMIT DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS FOR REVIEW.
- CONCRETE
1. ALL CONCRETE UNLESS OTHERWISE NOTED SHALL BE REGULAR WEIGHT HARD ROCK TYPE (150#/CU.FT.).

2. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-**05**) WITH MODIFICATIONS AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.

3. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTH AND TYPES:

LOCATION OF STRUCTURE

SIRENGTH

SLAB ON GRADE, & GRADE BEAMS, STRUCTURAL SLABS3000 PSI

ALL OTHER CONCRETE3000 PSI

4. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 TYPE II.

5. AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS.

6. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR HIS REVIEW 2 WEEKS PRIOR TO POUR.

7. CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C-94.

8. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI STANDARD 301 AND PROJECT SPECIFICATIONS.

9. UNLESS OTHERWISE NOTED ON THE PLANS, MINIMUM CLEAR COVERAGE OF NEW CONCRETE OVER OUTER REINFORCING BARS SHALL BE AS FOLLOWS:

A. CONCRETE POURED DIRECTLY AGAINST EARTH.....3" CLEAR TO REINFORCING

B. WALL FACES:

EXPOSED TO EARTH WITH FORMED SURFACES OR EXPOSED TO WEATHER.....1-1/2" CLEAR FOR #5 BAR & SMALLER2" CLEAR FOR #6 BARS & LARGER

INTERIOR FACES.....3/4" CLEAR

C. BEAMS AND COLUMNS:

NOT EXPOSED TO EARTH OR WEATHER.....1-1/2" CLEAR TO STIRRUPS & TIES

FORMED AND EXPOSED TO EARTH OR WEATHER.....1 1/2" CLEAR TO STIRRUPS & TIES

D. STRUCTURAL SLABS.....1" CLEAR AT TOP AND BOTTOM

10. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.

11. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, EQUIPMENT PADS, ETC., SHALL BE FORMED WITH 3/4" CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.

12. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.

13. CONDUIT OR PIPE SIZE (O.D.) THAT IS BURIED IN ANY CONCRETE SLABS SHALL NOT EXCEED 25 PERCENT OF SLAB THICKNESS AND SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCING UNLESS SPECIFICALLY DETAILED OTHERWISE. CONCENTRATIONS OF CONDUITS OR PIPES SHALL BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED.

14. THE CONCRETE SLAB THICKNESS SHALL BE MAINTAINED AS A MINIMUM UNLESS OTHERWISE SHOWN.

15. PROVIDE TWO-WEEK SCHEDULES SHOWING EXPECTED CONCRETE POUR LOCATIONS AND TIMES. NOTIFY STRUCTURAL ENGINEER AND SPECIAL INSPECTOR 48 HOURS PRIOR TO ANY CONCRETE POUR IF DIFFERENT THAN ON TWO-WEEK SCHEDULE.

16. CONCRETE ADMIXTURES CONTAINING CHLORIDE OR CHLORIDE SALTS SHALL NOT BE USED.

17. SEE SPECIFICATIONS FOR CONCRETE WITH SPECIAL CORROSION PROTECTION REQUIREMENTS.

18. ALL ROUGHENED SURFACES IN CONCRETE SHALL BE MADE WITH A MINIMUM AMPLITUDE OF 1/4"

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-**05**), THE CRSI "MANUAL OF STANDARD PRACTICE," AND THE "ACI DETAILING MANUAL (SP-66) AS MODIFIED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.

2. REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60 REQUIREMENTS. #4 AND SMALLER BARS MAY BE GRADE 40.

3. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS ARE TO BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED.

4. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.

5. REINFORCING SPLICES SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS.

6. DOWELS BETWEEN FOOTING AND WALL OR COLUMNS SHALL BE THE SAME GRADE, SIZE, SPACING, AND NUMBER AS THE VERTICAL REINFORCING RESPECTIVELY, U.O.N.

7. WELDING OF REINFORCING STEEL IS NOT PERMITTED UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

8. CONTRACTOR SHALL SUBMIT REINFORCING BAR LAYOUTS AND DETAILS FOR ARCHITECT'S REVIEW PRIOR TO FABRICATION. ~~FABRICATE FROM REVIEWED DRAWINGS ONLY.~~

9. REINFORCING BARS SHALL BE AS LONG AS PRACTICABLE AND AS DETAILED AND SHALL BE LAPPED AT SPLICES AND CORNERS NOT LESS THAN 32 BAR DIAMETER (24" MINIMUM), UNLESS OTHERWISE SHOWN. STAGGER HORIZONTAL WALL BAR SPLICES. IN GENERAL, BAR SPLICES SHALL BE MADE AT POINTS OF MINIMUM STRESS. IN BEAMS AND SLABS, SPLICE TOP BARS AT MID-SPAN, BOTTOM BARS OVER SUPPORTS, UNLESS OTHERWISE SHOWN. EMBEDDED METAL COMPONENTS MADE UP OF ALLOYS THAT ARE

10. DIS-SIMILAR TO THAT OF THE REINFORCING STEEL SHALL NOT BE ATTACHED DIRECTLY TO REINFORCING. MEASURES SHALL BE TAKEN TO ELECTRICALLY ISOLATE SAID COMPONENTS FROM ANY REINFORCING TO PREVENT CATHODIC EFFECTS.

COLD FORMED STEEL FRAMING

1. COLD-FORMED STEEL FRAMING SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING DESIGN STANDARDS:

A. "AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"

B. "ASTM C1007 "STANDARD SPECIFICATION FOR INSTALLATION OF LOAD BEARING STEEL STUDS AND RELATED ACCESSORIES"

C. AWS D.1.3 "STRUCTURAL WELDING CODE – SHEET STEEL"

2. COLD-FORMED STEEL FRAMING REFERENCES ARE FROM THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) AND ARE CONSISTENT WITH THE

MEMBER DEPTH (1/100 INCHES):  
(EX: 6" -> 600)  
FOR ALL "I" SECTIONS, MEMBER DEPTH IS THE INSIDE TO INSIDE DIMENSION.

FLANGE WIDTH (1/100 INCHES):  
(EX 1 5/8" = 1.625 -> 162)

STYLE:  
S = STUD OR JOIST SECTIONS  
T = TRACK SECTIONS  
U = CHANNEL SECTIONS  
F = FURRING CHANNEL SECTIONS  
HDS = DIETRICH HEADER SECTION

MATERIAL THICKNESS:  
27 = 22 GA. 54 = 16 GA.  
33 = 20 GA. 68 = 14 GA.  
43 = 18 GA. 97 = 12 GA.

3. COLD-FORMED STEEL FRAMING MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM SPECIFICATIONS, LATEST EDITION:

A. 18 GA. AND LIGHTER . . . . . ASTM A653 SS GRADE 230  
OR ASTM A1011 SS GRADE 230

B. 16 GA. AND LIGHTER . . . . . ASTM A653 SS GRADE 340, CLASS 1 OR 3  
OR ASTM A1011 SS GRADE 340

4. CONNECTIONS FOR COLD-FORMED STEEL SHALL CONFORM TO THE "AISI FASTENERS FOR RESIDENTIAL STEEL FRAMING RG-933," LATEST EDITION INCLUDING THE FOLLOWING:

A. SELF DRILLING SCREWS: ASTM C1002 TYPE S /ASTM C954 TYPE S-12

B. BOLTS, NUTS AND WASHERS: . . . . . ASTM A90

C. WELDED CONNECTIONS SHALL CONFORM TO AWS D1.3 E60 AND BE MADE IN THE SHOP. MEMBERS WITH BURN THRU'S SHALL BE REPLACED OR REPAIRED.

5. PROVIDE ADEQUATE MEASURES TO ENSURE THE CORROSION RESISTANCE OF THE STEEL MATERIALS AND FASTENERS. GALVANIZED COATINGS SHALL CONFORM TO ASTM C955, G60 MINIMUM. WELD AREAS SHALL BE RE-TOUCHED WITH THE APPROPRIATE PAINT OR COLD GALVANIZING TO RETAIN CORROSION RESISTANCE.

6. ALL COLD ROLLED STEEL STUDS, JOIST AND TRACK MILL CERTIFIED STEEL TO MEET: SSMA ICBO # ER-4943P

A. ASTM A446-GRADE D 14 AND 16 GA. GALV. STEEL, Fy = 50 ksi.

B. ASTM A446-GRADE A 25 - 18 GA. GALV. STEEL, Fy = 33 ksi.

7. ALL STEEL STUDS, JOIST AND TRACK SHALL HAVE A LEGIBLE LABEL, STAMP OR EMBOSSEMENT, AT A MAXIMUM OF 48" O.C. INDICATING THE MANUFACTURER'S NAME, LOGO OR INITIALS, ICBO EVALUATION SERVICE REPORT NUMBER, THE MATERIAL BASE METAL THICKNESS (UNCOATED) IN .001 in. AND THE YIELD STRENGTH IF DIFFERENT THAN 33 ksi.

FOUNDATION

1. THE FOUNDATION DESIGN WAS BASED ON THE THE GEOTECHINCAL INVESTIGATION REPORT DATED SEPTEMBER 25, 2013, BY CONSTRUCTION ENGINEERING LABS.

ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF (DEAD + LIVE)

ALLOWABLE INCREASE FOR WIND OR SEISMIC, 1000 PSF = 4000 PSF (TOTAL)

ALLOWABLE PASSIVE EARTH RESISTANCE = 600 PCF

FRICTIONAL RESISTANCE = 0.45 x DEAD LOAD

2. ANY FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS. FLOODING IS PROHIBITED.

3. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE.

CMU:

1. ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, LATEST EDITION, WITH COMPRESSIVE STRENGTH OF 1,900 PSI.

2. MORTAR SHALL BE PROPORTIONED AS NECESSARY TO CONFORM TO THE REQUIREMENTS OF IBC TABLE 2103.8 (ASTM C270) FOR TYPE M OR S MORTAR.

3. GROUT SHALL CONFORM TO ASTM C476 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS.

4. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF THE MASONRY WALL ASSEMBLAGE AT 28 DAYS (f'm) SHALL BE 1500 PSI.

5. BEFORE BLOCK IS PLACED ON CONCRETE, THOROUGHLY CLEAN CONCRETE OF ALL LAITANCE AND ALL LOOSE MATERIAL. ROUGHEN AS IN A CONCRETE CONSTRUCTION JOINT.

6. PLACE ALL HORIZONTAL BARS IN BOND BEAM UNITS. WHEN 2 BARS ARE USED, STAGGER LAPS A MINIMUM OF 5'-0". VERTICAL REINFORCING SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVAL NOT EXCEEDING 200 BAR DIAMETERS. TIE LAP SPLICE TO DOWEL BAR, IF REBAR POSITIONER IS NOT USED NEAR THE DOWEL BAR.

7. ALL EMBEDDED ITEMS (BOLTS, ETC.) SHALL BE SECURED IN PLACE PRIOR TO GROUTING. PROVIDE A MINIMUM OF 1" GROUT AROUND ALL BOLTS IN MASONRY.

8. CLEAN ALL CELLS AND BOND BEAMS OF EXCESSIVE MORTAR PROTRUSIONS AND OTHER DEBRIS BEFORE GROUTING.

9. MAXIMUM GROUT POUR WITHOUT CLEANOUT IS 5'-4" IN BLOCK WALL. WHEN GROUT POUR IS MORE THAN 5'-4" HIGH, CLEANOUTS SHALL BE AT EVERY VERTICAL BAR BUT NOT MORE THAN 32' O.C. IF REQUIRED, CLEANOUTS SHALL NOT BE SEALED BEFORE INSPECTION. THE THICKNESS OF GROUT BETWEEN BLOCK AND REINFORCING STEEL SHALL NOT BE LESS THAN 1/2", AND BETWEEN PARALLEL BARS NOT LESS THAN 3/4".

10. ALL CELLS SHALL BE SOLIDLY FILLED WITH GROUT.

11. WHEN GROUTING IS STOPPED FOR A PERIOD OF ONE HOUR OR LONGER, FORM HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT POUR 1.5 INCHES MINIMUM BELOW THE UPPER-MOST UNIT, EXCEPT AT TOP OF WALL.

12. WHEN SHOWN ON THE DRAWING, CONTROL JOINTS SHALL BE PLACED NOT LESS THAN 24" FROM A BEARING PLATE OR JAMB OF AN OPENING. PLACE BOND BEAM REINFORCING CONTINUOUS THROUGH EXPANSION AND CONTROL JOINTS, WRAPPING BARS WITH 1/8" THICK BOND BREAKING TAP 24" ON BOTH SIDES OF JOINT. DO NOT SPLICE BOND BEAM REINFORCING WITHIN 6'-0" OF AN EXPANSION OR CONTROL JOINT. LOCATION OF CONTROL JOINTS SHOULD BE COORDINATED WITH THE ENGINEER.

13. THE CONTRACTOR SHALL LOCATE CONSTRUCTION JOINTS SO AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE AND TO MINIMIZE SHRINKAGE STRESSES.

14. WALLS SHALL BE CONSTRUCTED IN CONVENTIONAL RUNNING BOND, UNLESS OTHERWISE NOTED.

SPECIAL INSPECTION:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT SPECIAL INSPECTION OF PORTIONS OF THE WORK, AS REQUIRED BY THE BUILDING CODE OF THE COUNTY OF HAWAII, BE MADE AT THE APPROPRIATE TIME. THE CONTRACTOR SHALL GIVE TIMELY NOTICE OF WHEN AND WHERE INSPECTIONS ARE TO BE MADE AND PROVIDE ACCESS FOR THE INSPECTOR. THE CONTRACTOR SHALL CORRECT DEFECTIVE WORK AT NO ADDITIONAL COST TO THE OWNER AND THE CONTRACTOR SHALL PAY FOR RE-INSPECTION.

2. CONTRACTOR IS RESPONSIBLE TO RETAIN LICENSED SPECIAL INSPECTORS IN COUNTY OF HAWAII TO PERFORM ALL SPECIAL INSPECTIONS REQUIRED AS LISTED BELOW. SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORT WITHIN 3 DAYS OF INSPECTION AND PRIOR TO ACCEPTANCE OF THE WORK

3. THE FOLLOWING IS A SUMMARY OF THE SPECIAL INSPECTION REQUIREMENTS:

INSPECTION OF P.E.M.B. MANUFACTURER	YES, PER IBC 1704.2.2
HIGH STRENGTH STEEL BOLTS	YES
WELDING	NO, NONE USED IN DESIGN
CONCRETE REINFORCING STEEL & FORMWORK	YES, PER IBC TABLE 1704.4
ANCHOR BOLTS (RODS) IN CONCRETE	YES, PER IBC TABLE 1704.4
CONCRETE POUR	YES PER IBC 1704.4.2.3
CONCRETE CYLINDER TEST	YES, 3 CYLINDERS PER 50 YD.
CONCRETE MASONRY	YES, PER IBC 1704.5
SOILS	NO, CONTROLLED FILL IS LESS THAN 12" THICK
WOOD CONSTRUCTION	NO
SEISMIC RESISTANCE	YES, PER IBC 1705.3

MARK	DATE	DESCRIPTION	ADD. 3: REVISED DESIGN LOADS AND MAXIMUM DEFLECTION							REVIEWED:	DATE
△	2014-4-10										

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 PALAMU STREET, SUITE C7, HILO, HAWAII 96720 | PHONE: 808.961.8311 / FAX: 808.961.8411

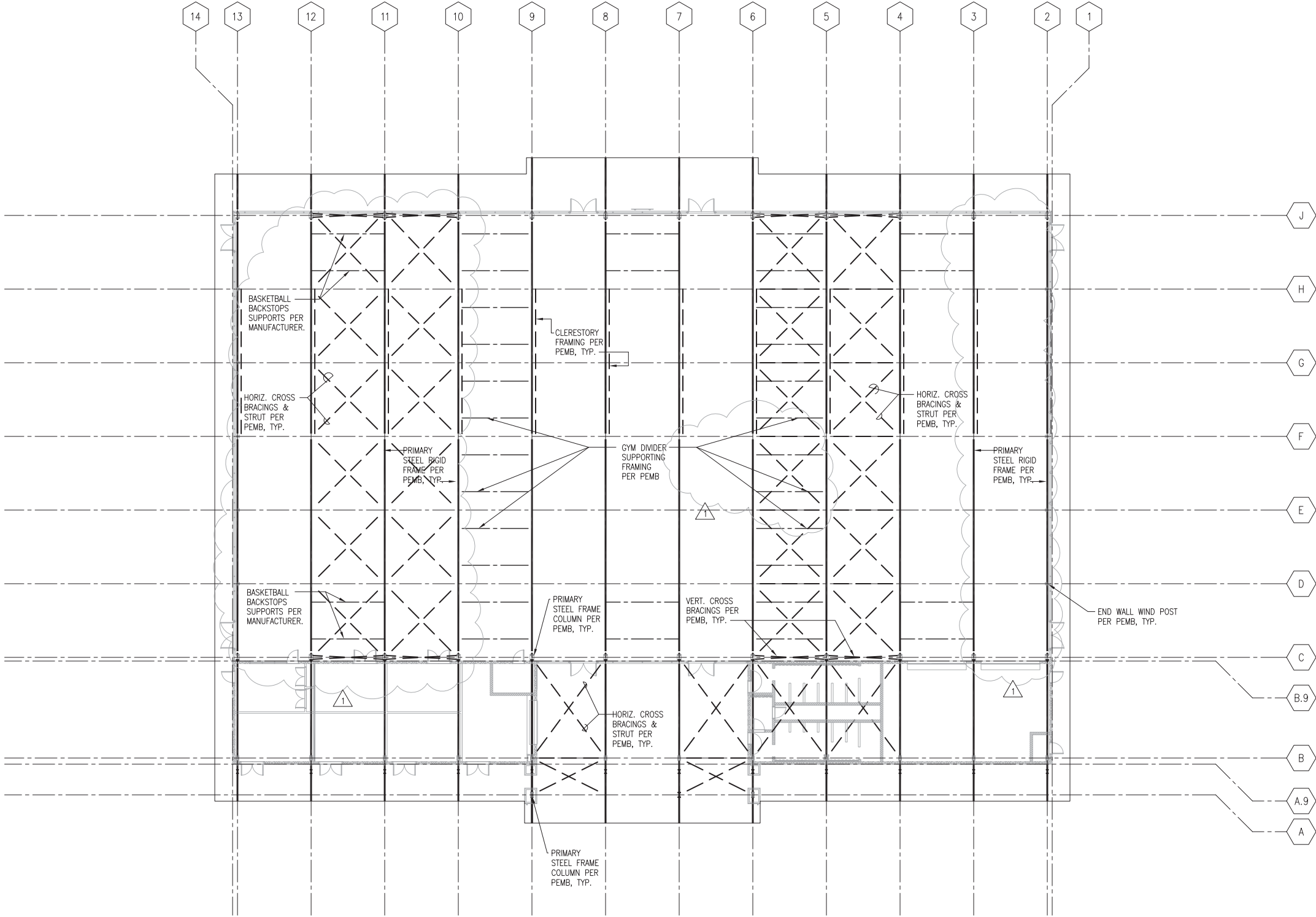
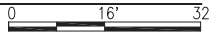
PAHOA PARK MASTER PLAN  
PHASE I - BID SUBMITTAL 2014-02-10

JOB NO.: PR-4234  
PAHOA, PUNA, HAWAII  
COVERED PLAYCOURT STRUCTURAL NOTES

SHEET NO.  
S-PC001

DATE: 2014-02-10  
OF SHEETS

**A COVERED PLAYCOURT ROOF FRAMING PLAN**  
SCALE: 1/16" = 1'-0"



- NOTES:
- PURLINS NOT SHOWN FOR CLARITY
  - PURLINS SHALL BE BRACED AGAINST LATERAL-TORSIONAL BUCKLING WITHOUT CONSIDERING METAL ROOFING AS LATERAL SUPPORT.
  - NOT ALL SECONDARY FRAMING ARE SHOWN. PEMB SHALL PROVIDE COMPLETE BUILDING SYSTEM TO ARCHITECTURAL, STRUCTURAL, AND FUNCTIONAL REQUIREMENTS.

DESIGNED BY: JTB  
DRAWN BY: JTB  
CHECKED BY: YWF

SHEET NO.  
**S-PC102**

OF SHEETS  
DATE: 2014-02-10

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 PAULAN STREET, SUITE 67, HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411

**PAHOA PARK MASTER PLAN**  
**PHASE I - BID SUBMITTAL 2014-02-10**  
JOB NO.: PR-4234  
PAHOA, PUNA, HAWAII  
TMK: (3) 1-5-002-020

PLAN, SHEET DESCRIPTION:  
COVERED PLAYCOURT ROOF FRAMING PLAN

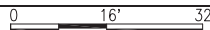
MARK	DATE	DESCRIPTION
A	2014-4-10	ADD. 3: LABELING ADDED SUPPORT BEAMS BETWEEN GRID 5 & 6, BRACING RELOCATED

REVIEWED: \_\_\_\_\_  
DEPARTMENT OF PARKS AND RECREATION  
DATE: \_\_\_\_\_

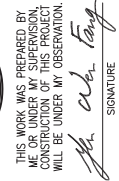
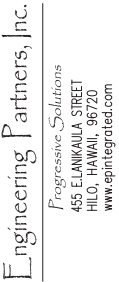



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION, CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.  
*Steven F. Yang*  
SIGNATURE

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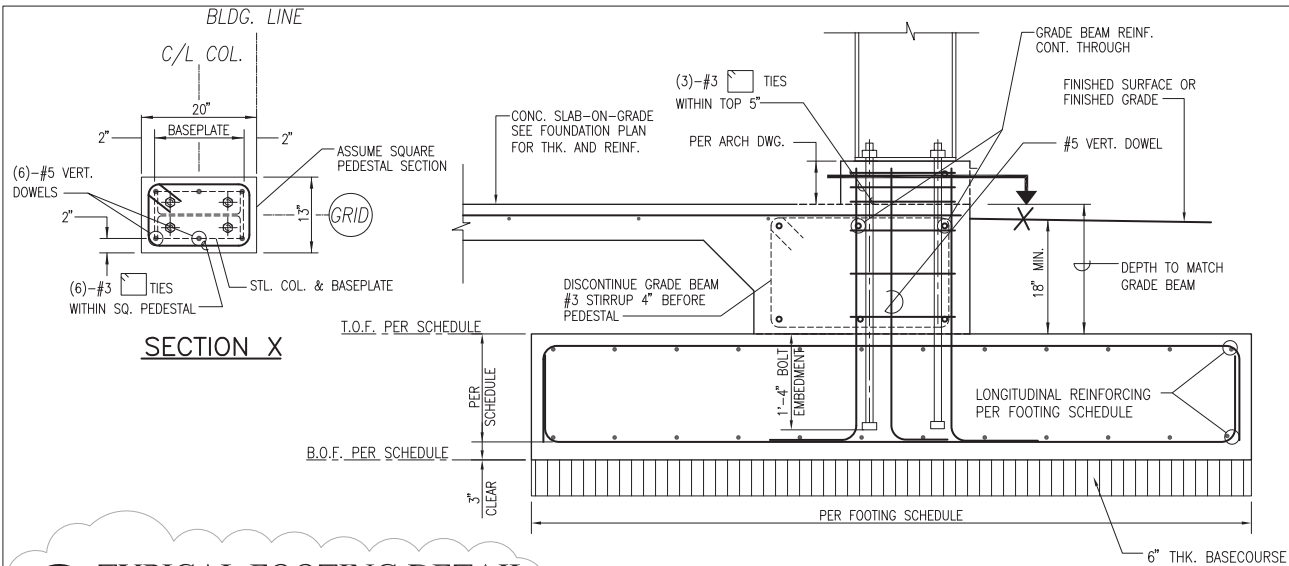
SCALE:  $1/16'' = 1'-0''$



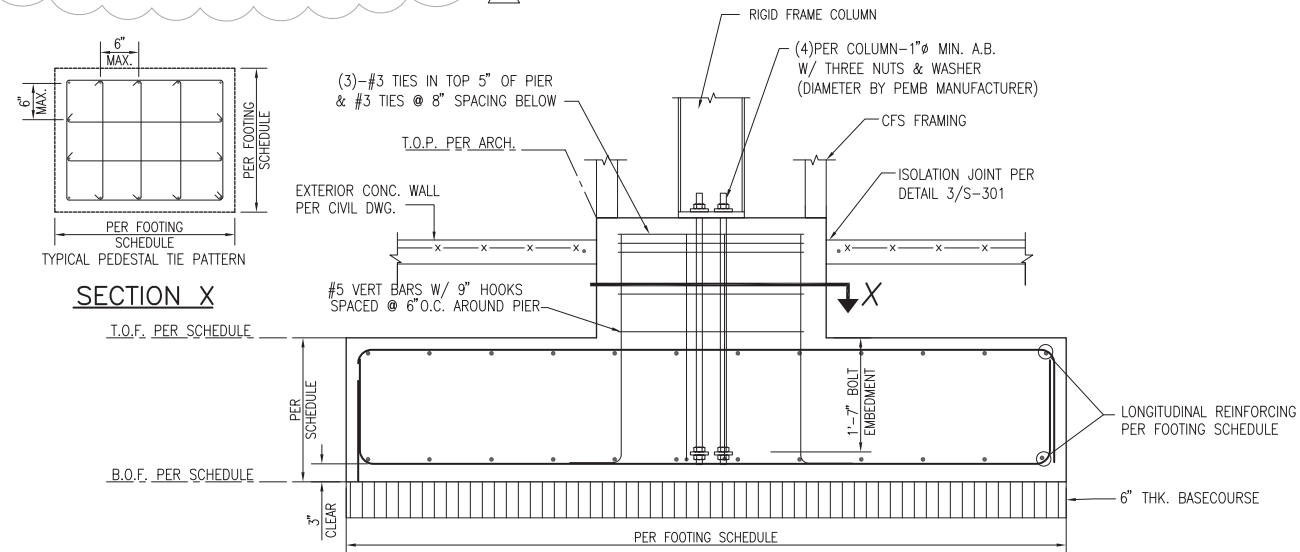
DESIGNED BY: JTB	 <p>COUNTY OF HAWAII DEPARTMENT OF PARKS &amp; RECREATION 101 PAUHAU STREET, SUITE 6 / HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411</p>	<p>PAHOA PARK MASTER PLAN PHASE I - BID SUBMITTAL 2014-02-10</p>	<p>JOB NO.: PR-4234 PAHOA, PUNA, HAWAII</p>	<p>COVERED PLAYCOURT BUILDING SECTIONS</p>	<p>TMK: (3) 1-5-002-020</p>
DRAWN BY: JTB					
CHECKED BY: YMF					
<p>SHEET NO. S-PC202</p>		<p>OF SHEETS</p>	<p>DATE:</p>	<p>PLAN SHEET DESCRIPTION:</p>	<p>DATE:</p>

DEPARTMENT OF PARKS AND RECREATION

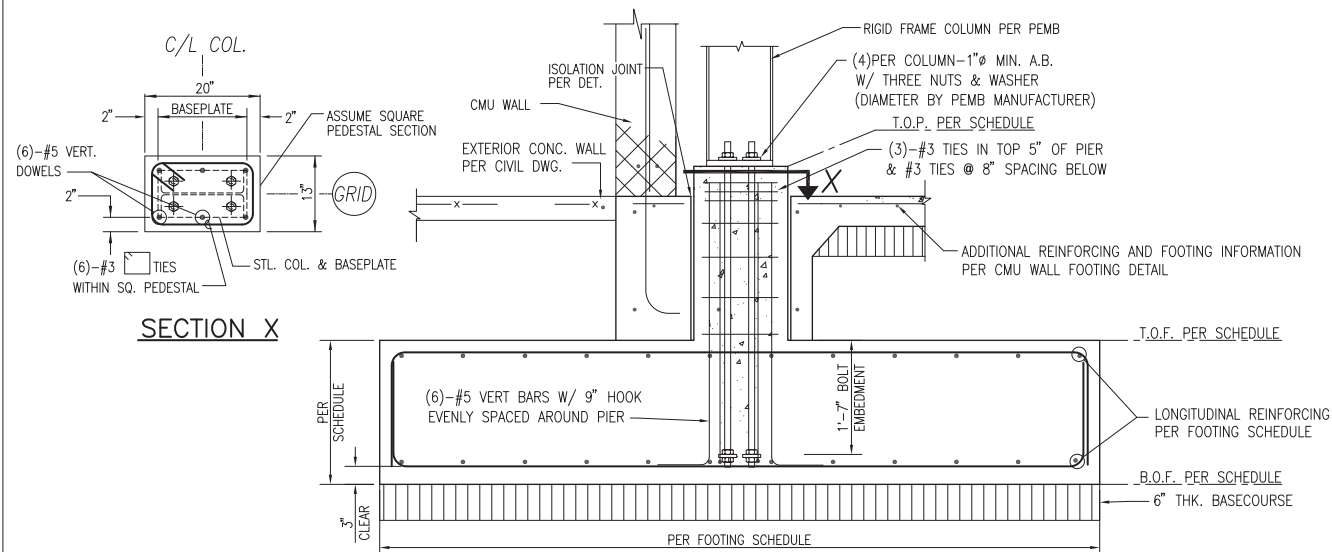




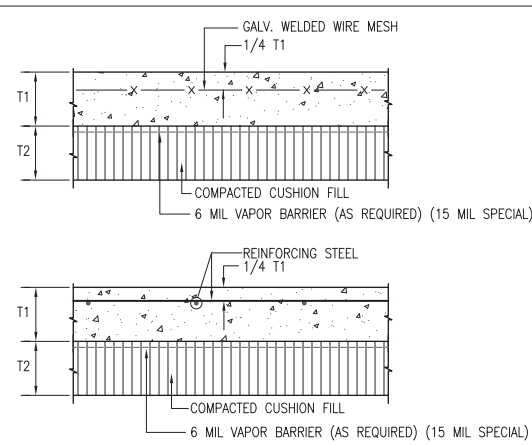
**7 TYPICAL FOOTING DETAIL**  
NOT TO SCALE



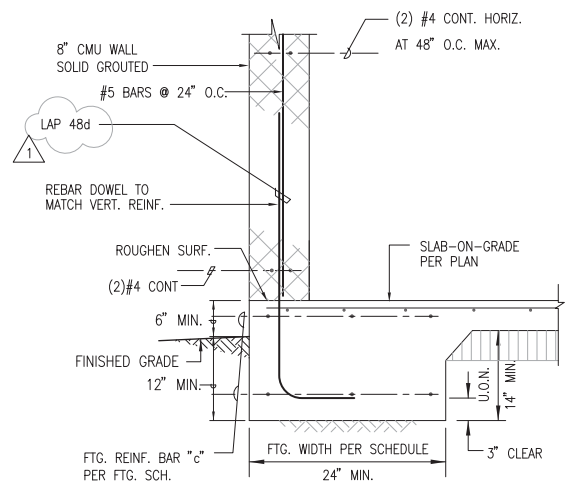
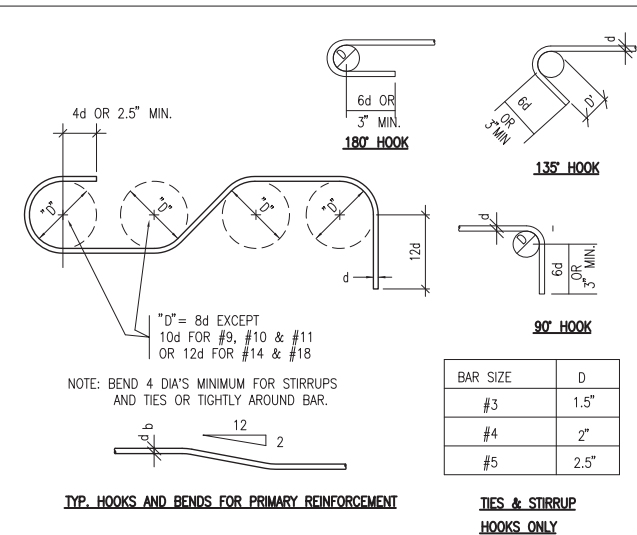
**8 TYPICAL FOOTING DETAIL**  
NOT TO SCALE



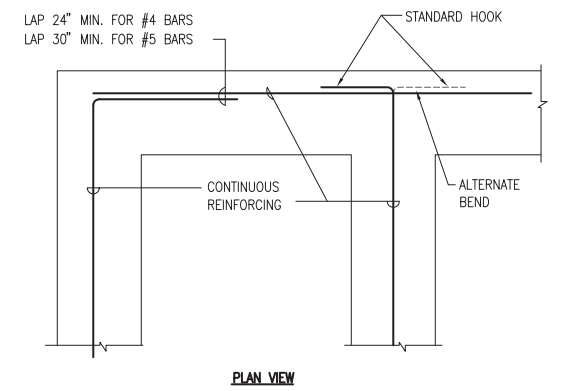
**9 TYPICAL FOOTING DETAIL**  
NOT TO SCALE



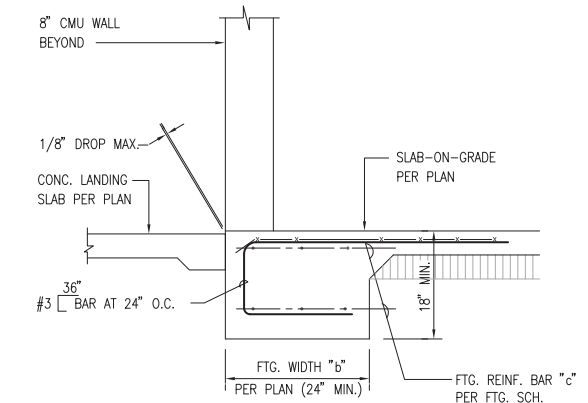
- NOTE:
1. SLAB-ON-GRADE THICKNESS AS PER PLAN. (T1=4" MIN.)
  2. CUSHION FILL THICKNESS AS PER PLAN. (T2=4" MIN.)
  3. CUSHION FILL SHALL BE #3 FINE GRAVEL (ASTM NO. 67 GRAVEL)
  4. UNLESS OTHERWISE NOTED, MINIMUM CONCRETE COMPRESSIVE STRENGTH, f'c SHALL BE 2500 PSI.



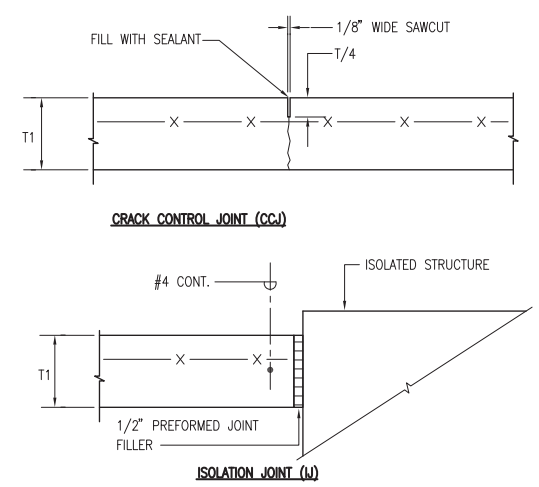
**5 CMU WALL AND FOOTING DETAIL**  
NOT TO SCALE



**2 TYP. FOOTING REINF. DETAIL**  
NOT TO SCALE



**6 TYP. FOOTING REINF. DETAIL**  
NOT TO SCALE



**3 CONCRETE JOINTS**  
NOT TO SCALE

**Engineering Partners, Inc.**

Progressive Solutions  
455 ELANIKAULA STREET  
HILO, HAWAII 96720  
www.eptinc.com

THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION,  
CONSTRUCTION OF THIS PROJECT  
WILL BE UNDER MY OBSERVATION.

*[Signature]*  
SIGNATURE

DESIGNED BY: JTB  
DRAWN BY: JTB  
CHECKED BY: YWF

SHEET NO.  
**S-PC301**

DATE: 2014-02-10  
OF SHEETS

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 FAUNAI STREET SUITE C HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411

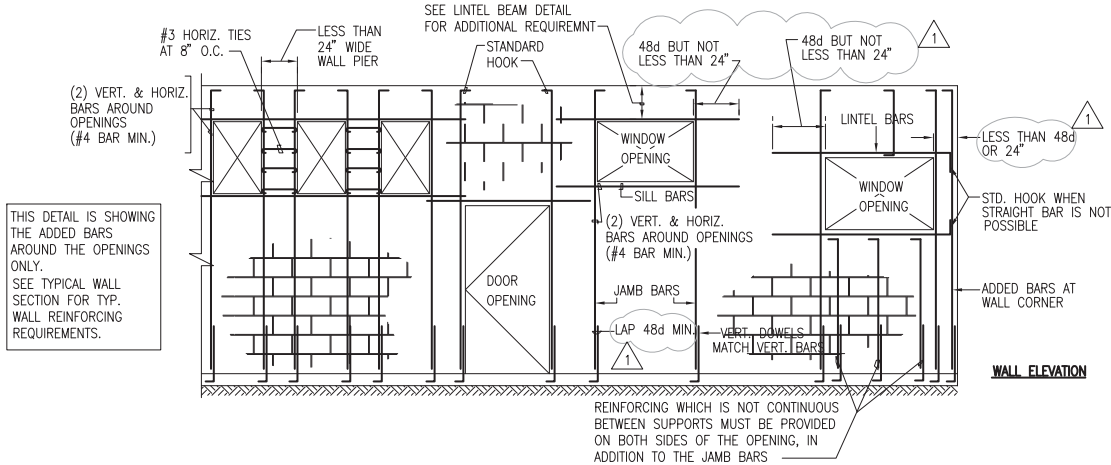
**PAHOA PARK MASTER PLAN  
PHASE I - BID SUBMITTAL 2014-02-10**

TWK: (3) 1-5-002:020  
PAHOA, PUNA, HAWAII  
JOB NO.: PR-4234  
COVERED PLAYCOURT STRUCTURAL DETAILS

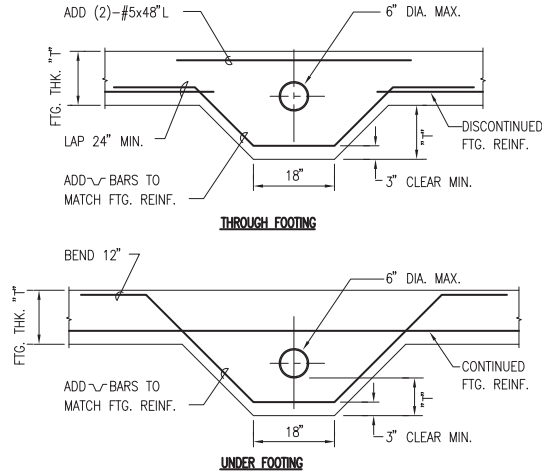
DESCRIPTION  
ADD. 3: DETAIL 7 REVISED FOR CLARITY.  
LAP SPICE CHANGED TO 48d ON DETAIL 5

DATE  
2014-4-10

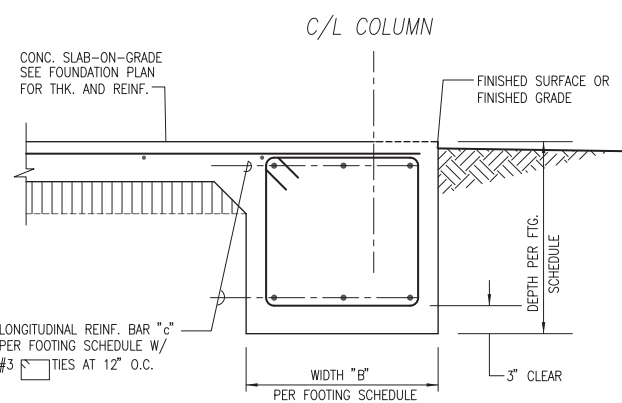
REVIEWED:  
DEPARTMENT OF PARKS AND RECREATION



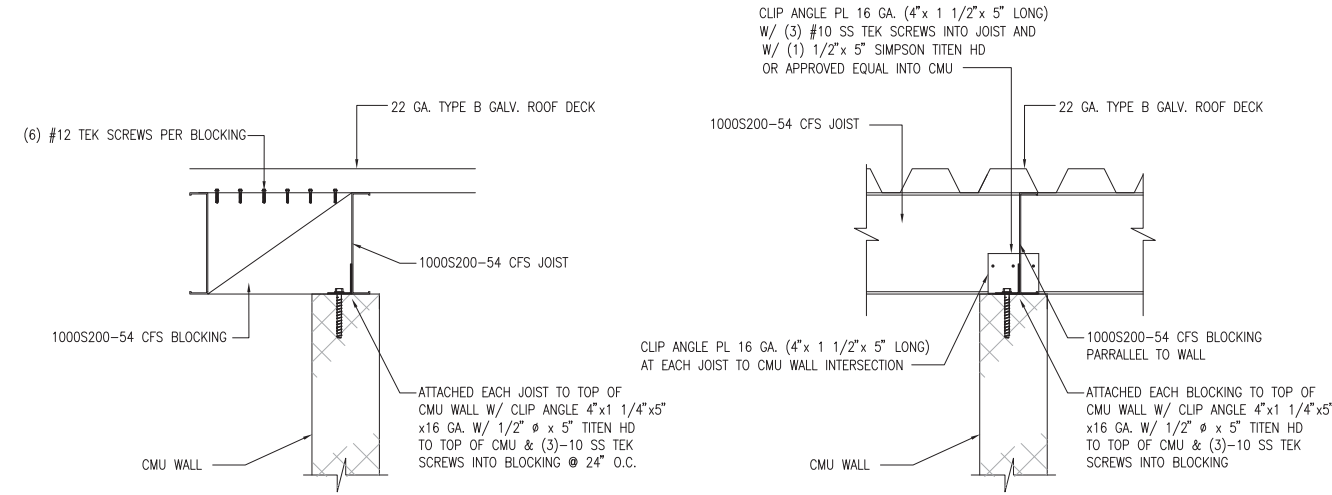
7 TYP. CMU WALL OPENING  
NOT TO SCALE



4 TYP. PIPE SLEEVE FOOTING  
NOT TO SCALE

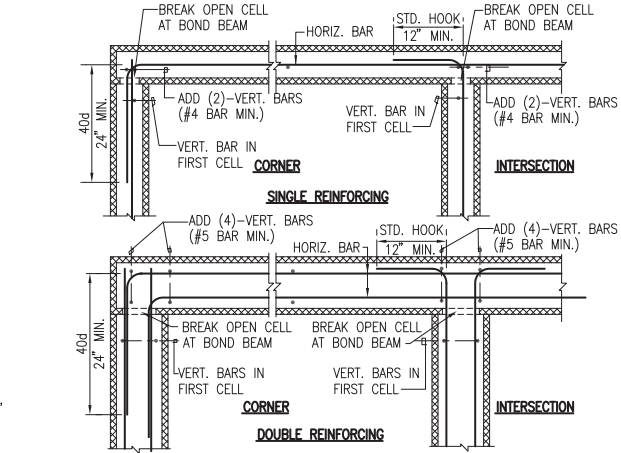


1 GRADE BEAM DETAIL  
NOT TO SCALE

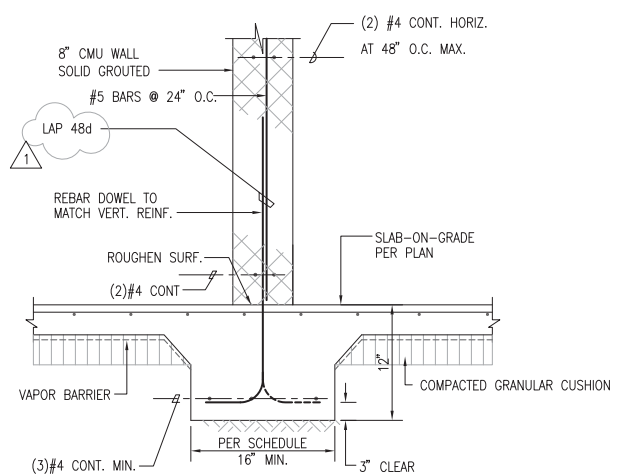


10 JOIST PARALLEL TO CMU WALL  
NOT TO SCALE

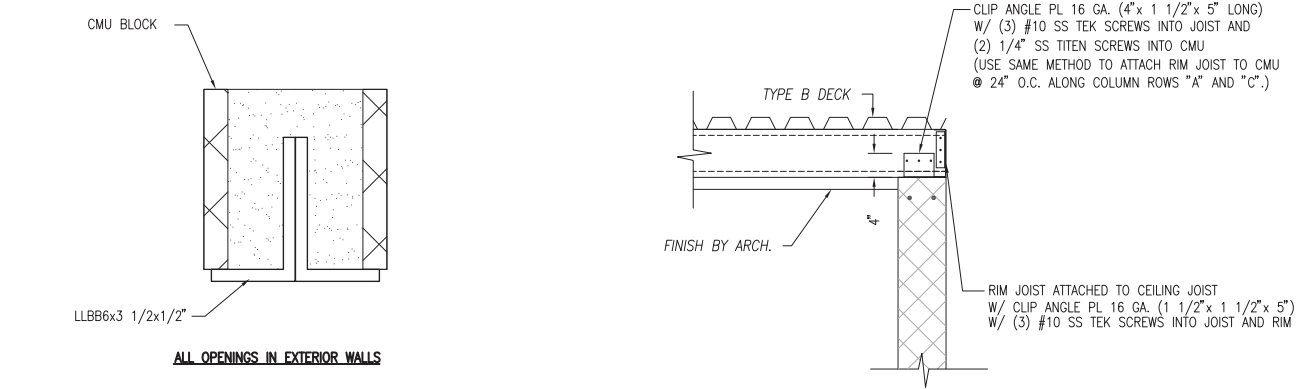
8 JOIST TO CMU WALL  
NOT TO SCALE



5 CMU WALL CORNERS AND INTERSECTIONS  
NOT TO SCALE

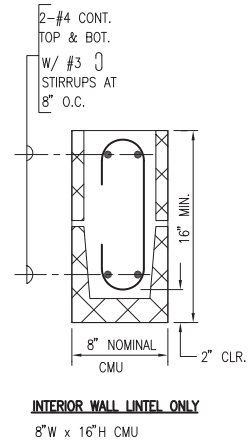


2 CMU WALL AND FOOTING DETAIL  
NOT TO SCALE

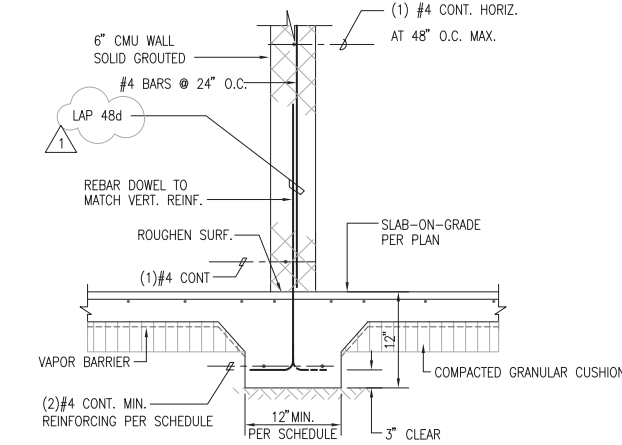


11 LINTEL BEAM DETAIL  
NOT TO SCALE


9 JOIST TO CMU WALL  
NOT TO SCALE



6 LINTEL BEAM DETAIL  
NOT TO SCALE



3 6" CMU WALL AND FOOTING DET.  
NOT TO SCALE



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*[Signature]*  
SIGNATURE

MARK	DATE	DESCRIPTION
A	2014-4-10	ADD. 3: LAP SPICE ON DETAILS 2, 3 & 7 CHANGED TO 48d

DESIGNED BY: JTB  
DRAWN BY: JTB  
CHECKED BY: YWF

**S-PC302**

**PAHOA PARK MASTER PLAN**

**PHASE I - BID SUBMITTAL 2014-02-10**

DATE: 2014-02-10

SHEETS OF

COVERED PLAYCOURT STRUCTURAL DETAILS

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 PAULAN STREET, SUITE C7 HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411

**PAHOA PARK MASTER PLAN**

**PHASE I - BID SUBMITTAL 2014-02-10**

PAHOA, PUNA, HAWAII

JOB NO.: PR-4234

TMK: (3) 1-5-002:020

